

APPARATUS AND METHOD FOR SEPARATING  
DETECTION AND ASSERTION OF A TRIGGER EVENT

**Abstract of the Invention**

1 A trace test and debug system for a target processor  
2 includes a trigger unit or other apparatus that permits the  
3 detection of selected events. The trigger unit also  
4 receives input signals concerning the operational mode of  
5 the target processor. The trigger unit is responsive to  
6 programmed input by a user. As a consequence, the trigger  
7 unit can separate the detection of an event from the  
8 response to the event. In the specific example of the  
9 trigger unit, the generated trigger signals can be  
10 separated from the actual detection of the event. This  
11 capability is particularly useful when the user desires  
12 that the assertion of the response to an event occurring  
13 during foreground (interrupt service routine) not be  
14 permitted during the foreground code execution. The  
15 assertions of the response to an event are therefore  
16 delayed until the target processor is in a background  
17 (normal program) mode of operation. Thus, the response to  
18 an event can be separated from the detection of the event  
19 under the control of the user.